



Depot Maintenance Transformation (DMT)

“Improving production, processes and support to provide customers with responsive, predictable and affordable products and services”

Why transform?

Depot maintenance and repair is a core competency of the Air Force and a vital element of Agile Combat Support. The Air Force Depot Maintenance Strategy delivered to Congress laid out three key requirements to transform the public sector depots into “world class” Maintenance, Repair, and Overhaul (MRO) operations and service providers:

- Recruit, train and retain a high quality workforce
- Implement innovative depot maintenance processes
- Sustain a robust, modern, properly sized infrastructure

As the Air Force fleet ages additional depot level work is required resulting in longer turnaround times and higher cost. We must increase aircraft availability with timely deliveries and fewer assets in depot status plus we must ensure our products and services are affordable.

What is DMT?

Building upon the foundation laid by the Depot Maintenance Reengineering and Transformation (DMRT) effort, Headquarters Air Force Materiel Command, Directorate of Logistics, chartered a Business Process Reengineering (BPR) team, to integrate process improvement efforts on the shop floor with production support processes and to determine the most effective MRO information system enabler. The team, comprised of maintenance, financial and supply managers from HQ AFMC, all three Air Logistics Centers, AMARC as well as other stakeholders such as Defense Logistics Agency and Defense Contract Audit Agency, took a “Lean” approach to integrate process improvements on the shop floor with production support processes. They

conducted numerous benchmarking visits to both DoD and private sector operations, conducted value stream mapping and analysis, and developed a future state and action plan.

What are other successful MRO operations doing?

The team discovered common threads among the successful MRO operations. The shop floor was laid out in a cellular design with work being pulled through the cell one by one. The cells were clean and organized, with the right people, tools, equipment and materials located within the cell to accomplish the job. Simplicity proved to be more efficient and effective whether it was visual controls, white boards, right-sized equipment, or information systems. Overhead support was concentrated at the shop floor and limited outside of the production line. Culture change and training were critical success factors. The MRO operation developed excellent relationships with suppliers and customers and was focused on increasing throughput, reducing work in progress, and lowering costs.

What will our future depot maintenance operation look like?

- Single piece cellular flow – one by one
- All resources at point of use at time of need
- Flexible workforce (blue and white collar)
- Standard work
- Visual controls
- One simple information system
- Right-sized, state of the art, facilities/equipment
- Alignment of responsibility, authority, and accountability
- Pro-active planning and scheduling of workload in anticipation of customer requirements

What is different in the future state?

We will have a “Lean” focus on production and production support. Each production line will implement 6S (sort, straighten, scrub, standardize, safety, and sustain), reconfigure into product cells, and construct a tailored logistics support plan that will provide all material and tools at point of use. We will have enterprise processes that will be more effective and efficient. We will establish Production Support Cells (PSC) that will support and be located on the shop floor. The Pre-Planning Cell (PPC) will ensure all resources are planned and available prior to asset induction. We will collaborate with customers to ensure the requirement is clearly defined and our products and services meet their demands. We will collaborate with suppliers to develop effective logistics support to the shop floor. Our information systems will be simple, responsive, and easily provide accurate data. We will develop a professional, flexible workforce that is well trained and has a culture that thrives on continuous improvement.

What are our goals?

- Achieve 100% On-Time Delivery
 - Reduce Turnaround Time by 30%
 - Reduce WIP
- Improve affordability
 - Cut cost by 25%
 - Provide reliable, predictable prices
- Improve data system efficiency
 - Utilize commercial-off-the-shelf products
 - Reduce/eliminate legacy and “home-grown” systems
- Lower Customer Reported Defects
- Meet goals by 2006
 - Incremental progress as transformation occurs
 - Continuous improvement after 2006

What is our timeline?

The BPR team conducted the first meeting in April 2003. They conducted benchmarking visits, value stream analysis over the following two months, and gained approval from the Maintenance Executive Steering Group in June 2003. The team conducted a road show at each of the Air Logistics Centers in July 2003 to present the findings and obtain recommended changes to the process. Final approval is expected following a Red Team review by DoD, Air Force, and private industry senior leaders. Production shop floor change over has already begun in some areas. Eighty-percent of all production lines must be converted to cellular flow by the end of 2004. Further definition of the new production support processes will resume in August 2003 and continue for four months. Simultaneously, the team will conduct a review of existing policies and procedures and immediately begin to revise and implement new policies that will support a “Lean” organization. Production support and Pre-production cell structure will be stood up by December 2003. The team will determine the most effective system solution to support the production support process by December 2003 and system implementation will be completed by 2006.

How can I learn more about DMT?

For more information, we invite you to visit our website at:

<https://www.afmc-mil.wpafb.af.mil/HQ-AFMC/LG/lgp>

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